

Application No. 09/845,985

AMENDMENT TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Currently Amended) An electrode active material comprising a collection of particles comprising a crystalline composition with a phosphate anion and a lithium cation, the collection of particles having an average particle size less than ~~[[about]]~~ 1000 nm and having essentially no particle with ~~[[an]]~~ a diameter greater than about 5 times the average particle size.
2. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 1 having an average particle size from 5 nm to ~~[[about]]~~ 250 nm.
3. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 1 having an average particle size from 5 nm to ~~[[about]]~~ 100 nm.
4. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 1 having a plurality of metals in the composition.
5. (Canceled)

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6. (Currently Amended) The electrode active material ~~collection of particle~~ of claim 1 having at least three metals within the composition.
7. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 1 wherein the composition comprises Li_xFePO_4 , $0.1 \leq x \leq 1$.
8. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 1 wherein the composition comprises $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, $0 \leq x \leq 0.8$.
9. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 1 wherein the composition comprises $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, $0.4 \leq x \leq 0.8$.
10. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 1 wherein the composition comprises M_xPO_4 , wherein M is a metal, x is a rational number and $x \leq 4$.
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 1 having essentially no particle with an diameter greater than about 3 times the average particle size.

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15. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 1 having a distribution of particle sizes such that at least about 95 percent of the particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.

16. (Currently Amended) A battery comprising ~~[[an]]~~ a positive electrode ~~cathode~~, the positive electrode ~~cathode~~ comprising the electrode active material ~~collection of particles~~ of claim 1, the particles comprising lithium metal phosphate.

17. (Previously presented) The battery of claim 16 wherein the lithium metal phosphate comprises Li_xFePO_4 , $0.1 \leq x \leq 1$.

18. (Original) The battery of claim 16 wherein the lithium metal phosphate comprises $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, where $0.6 \leq x \leq 0.8$.

19. (Currently Amended) The battery of claim 16 comprising a negative electrode ~~an anode~~ having lithium metal.

20. (Currently Amended) The battery of claim 16 comprising a negative electrode ~~an anode~~ having a lithium intercalation compound.

21-54. (Canceled)

55. (Currently Amended) An electrode active material comprising a collection of particles comprising a crystalline composition with a phosphate anion and a lithium cation, the collection of

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particles having an average particle size less than [[about]] 1000 nm and having a distribution of particle sizes such that at least about 95 percent of the particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.

56. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 55 having an average particle size from 5 nm to [[about]] 100 nm.

57. (Currently Amended) The electrode active material ~~collection of particles~~ of claim 55 having a plurality of metals in the composition.

58-61. (Canceled)

Please add the following new claims.

62. (New) The electrode active material of claim 55 wherein the composition comprises Li_xFePO_4 , $0.1 \leq x \leq 1$.

63. (New) The electrode active material of claim 55 wherein the composition comprises $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, $0 \leq x \leq 0.8$.

64. (New) The electrode active material of claim 55 wherein the composition comprises $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, $0.4 \leq x \leq 0.8$.

65. (New) The electrode active material of claim 55 wherein the composition comprises M_xPO_4 , wherein M is a metal, x is a rational number and $x \leq 4$.

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66. (New) A battery comprising a positive electrode, the positive electrode comprising the electrode active material of claim 55, the particles comprising lithium metal phosphate.

67. (New) The battery of claim 66 wherein the lithium metal phosphate comprises Li_xFePO_4 , $0.1 \leq x \leq 1$.

68. (New) The battery of claim 66 wherein the lithium metal phosphate comprises $\text{LiFe}_{1-x}\text{Mn}_x\text{PO}_4$, where $0.6 \leq x \leq 0.8$.

69. (New) The battery of claim 66 comprising a negative electrode having lithium metal.

70. (New) The battery of claim 66 comprising a negative electrode having a lithium intercalation compound.